

## CLAIMS

WHAT IS CLAIMED IS:

5           1. A method of treating immunosuppression in a warm-blooded animal, comprising administering to the animal an amount of a composition selected from the group consisting of combretastatin A4, prodrugs thereof, and mixtures thereof, effective to enhance immune responsiveness without causing  
10           vascular destruction.

          2. A method according to claim 1, comprising administering to the animal said amount of said composition and another agent for counteracting immunosuppression.  
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          3. A method according to claim 2, wherein said other agent is a selective inhibitor of NOS.

          4. A method of treating a warm-blooded animal bearing a tumor, comprising  
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(a) subjecting the animal to immunotherapy to inhibit or kill tumor cells, while

(b) administering to the animal an amount of a composition selected from the group consisting of combretastatin A4, prodrugs thereof, and mixtures thereof, effective to  
25           enhance immune responsiveness.

          5. A method according to claim 4, wherein step (a) comprises subjecting the animal to immune stimulating therapy.  
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          6. A method according to claim 5, wherein step (a) comprises subjecting the animal to immuno-gene therapy.

          7. A method according to claim 6, wherein step (a) comprises vaccinating the animal with tumor cells genetically modified to produce at least one cytokine that augments a cytolytic immune response.  
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8. A method according to claim 4, wherein said composition is combretastatin A4.

5 9. A method according to claim 4, wherein said composition is administered in an amount insufficient to effect substantial destruction of tumor vasculature.

10 10. A method according to claim 4, wherein said composition comprises at least one of said prodrugs and wherein said one prodrug is a metal or amine phosphate salt of combretastatin A4.

15 11. A method according to claim 10, wherein said composition is combretastatin A4 disodium phosphate.

20 12. A method according to claim 4, wherein step (b) comprises administering to the animal said amount of said composition and another agent for counteracting immunosuppression.

25 13. A method according to claim 12, wherein said other agent is a selective inhibitor of NOS.

30 14. A method of treating a warm-blooded animal bearing a tumor and exhibiting tumor-induced immunosuppression, comprising subjecting the animal to immune-response-enhancing therapy while administering to the animal an amount of a composition selected from the group consisting of combretastatin A4, prodrugs thereof, and mixtures thereof, effective to reduce immunosuppression but insufficient to effect substantial destruction of tumor vasculature.